

1. Solve for h.  
 $12 - 3h = 2h + 2$
2. Solve for m.  
 $2m = 5m - 12$
3. Solve for w.  
 $2w - 7 = 8 - 3w$
4. Solve for t.  
 $4t - 3 = 5 + 2t$
5. Solve for j.  
 $-3j = 8 - 7j$
6. Solve for s.  
 $7s - 8 = -s$
7. Solve for g.  
 $3g - 5 = -2 + 2g$
8. Solve for p.  
 $2 - 3p = 2p - 18$
9. Solve for k.  
 $4k - 3 = 1 + 2k$
10. Solve for q.  
 $-2q - 1 = -3q + 2$

## KEYS

To solve for a variable, use inverse operations to undo the operations in the equation. Be sure to gather like terms and to do the same operation to both sides of the equation.

1.  $12 - 3h = 2h + 2$

$$12 - 3h = 2h + 2$$

$$12 - 5h = 2$$

$$-5h = -10$$

$$h = 2$$

Subtract  $2h$  from both sides

Subtract  $12$  from both sides

Divide both sides by  $-5$

2.  $2m = 5m - 12$

$$2m = 5m - 12$$

$$-3m = -12$$

$$m = 4$$

Subtract  $5m$  from both sides

Divide both sides by  $-3$

3.  $2w - 7 = 8 - 3w$

$$2w - 7 = 8 - 3w$$

$$5w - 7 = 8$$

$$5w = 15$$

$$w = 3$$

Add  $3w$  to both sides

Add  $7$  to both sides

Divide both sides by  $5$

4.  $4t - 3 = 5 + 2t$

$$4t - 3 = 5 + 2t$$

$$2t - 3 = 5$$

$$2t = 8$$

$$t = 4$$

Subtract  $2t$  from both sides

Add  $3$  to both sides

Divide both sides by  $2$

5.  $-3j = 8 - 7j$

$$-3j = 8 - 7j$$

$$4j = 8$$

$$j = 2$$

Add  $7j$  to both sides

Divide both sides by  $4$

6.  $7s - 8 = -s$

$$7s - 8 = -s$$

$$8s - 8 = 0$$

$$8s = 8$$

$$s = 1$$

Add  $s$  to both sides

Add 8 to both sides

Divide both sides by 8

---

7.  $3g - 5 = -2 + 2g$

$$3g - 5 = -2 + 2g$$

$$g - 5 = -2$$

$$g = 3$$

Subtract  $2g$  from both sides

Add 5 to both sides

---

8.  $2 - 3p = 2p - 18$

$$2 - 3p = 2p - 18$$

$$2 - 5p = -18$$

$$-5p = -20$$

$$p = 4$$

Subtract  $2p$  from both sides

Subtract 2 from both sides

Divide both sides by  $-5$

---

9.  $4k - 3 = 1 + 2k$

$$4k - 3 = 1 + 2k$$

$$2k - 3 = 1$$

$$2k = 4$$

$$k = 2$$

Subtract  $2k$  from both sides

Add 3 to both sides

Divide both sides by 2

---

10.  $-2q - 1 = -3q + 2$

$$-2q - 1 = -3q + 2$$

$$q - 1 = 2$$

$$q = 3$$

Add  $3q$  to both sides

Add 1 to both sides

---